

INTERNATIONAL SEARCH REPORT

International Application No

PC 03/04853

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C10G67/06 C10G25/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C10G B01D C10M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, API Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | US 6 179 994 B1 (CLARK JANET R ET AL) 30 January 2001 (2001-01-30) claim 1; figure; examples 1-3; tables 3,5 column 1, line 66 -column 2, line 7 column 9, line 11-60 --- | 1-4 |
| X | US 6 332 974 B1 (RYAN DANIEL F ET AL) 25 December 2001 (2001-12-25) claim 1; figure; examples 1-3; tables 1,2 column 1, line 50-65 column 8, line 15-64 --- | 1-4 |
| A | GB 815 264 A (FORSCH PATENTVERWERTUNG GES) 24 June 1959 (1959-06-24) claim 1; figure 1 * page 1, lines 28-35 and 74-91 * --- -/-- | 1-4 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

23 July 2003

Date of mailing of the International search report

08/08/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Harf, J

INTERNATIONAL SEARCH REPORT

Int. Application No.
PCT/EP 03/04853

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| A | <p>WO 95 17482 A (MOBIL OIL CORP) 29 June 1995 (1995-06-29) page 2, line 8-23 page 5, line 13-18 page 5, line 34 -page 6, line 8 -----</p> | 1-4 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 03/04853

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|----|---------------------|----------------------------|---------------------|
| US 6179994 | B1 | 30-01-2001 | AU 752602 B2 | 26-09-2002 |
| | | | AU 5693899 A | 27-03-2000 |
| | | | BR 9913412 A | 22-05-2001 |
| | | | CA 2340627 A1 | 16-03-2000 |
| | | | EP 1144552 A2 | 17-10-2001 |
| | | | JP 2002527530 T | 27-08-2002 |
| | | | NO 20011000 A | 04-05-2001 |
| | | | WO 0014184 A2 | 16-03-2000 |
| | | | US 6375830 B1 | 23-04-2002 |
| US 6332974 | B1 | 25-12-2001 | AU 750548 B2 | 18-07-2002 |
| | | | AU 5680899 A | 03-04-2000 |
| | | | BR 9913583 A | 22-05-2001 |
| | | | CA 2341607 A1 | 23-03-2000 |
| | | | EP 1144551 A2 | 17-10-2001 |
| | | | JP 2002538232 T | 12-11-2002 |
| | | | NO 20011245 A | 10-05-2001 |
| | | | TW 495548 B | 21-07-2002 |
| | | | WO 0015736 A2 | 23-03-2000 |
| GB 815264 | A | 24-06-1959 | NONE | |
| WO 9517482 | A | 29-06-1995 | DE 69424442 D1 | 15-06-2000 |
| | | | DE 69424442 T2 | 24-08-2000 |
| | | | EP 0736079 A1 | 09-10-1996 |
| | | | JP 9507092 T | 15-07-1997 |
| | | | WO 9517482 A1 | 29-06-1995 |